

[54] DOOR HINGE

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[21] Appl. No.: 879,921

[22] Filed: Jun. 30, 1986

[51] Int. Cl.⁴ E05D 7/00

[52] U.S. Cl. 16/354; 16/371

[58] Field of Search 16/354, 371; 49/246, 49/383; 52/238.1, 243.1, 32, 207

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[57] ABSTRACT

A concealed swinging door hinge which allows a door to close with a better fit to the jam or adjacent door and yet allows the door to open a full one hundred and eighty degrees and provides good clearance when so open is disclosed in four embodiments. In each embodiment, the hinge employs a link member between the door and jam which defines two vertical hinges, one coupled to the jam and the other to the door. The hinge includes means for advancing the respective hinge axes out from the jam and door as the door swings open, and for retracting them as it swings closed, as well as means for coordinating such hinge advance and retreat so that each advances and retreats at least approximately the same distance as the door swings open or closed. In the first embodiment, the link member forms continuous hinges down the entire length of the door with two arm members, one coupled to the jam and one to the door. These arm members can each pivot at their respective points of attachment to the jam or door, and the advancement and retreat is achieved by two partial gears affixed at each continuous hinge, one of which meshes in a gear block affixed to the jam and the other in a gear block, affixed to the door. Coordination is achieved by a set of two partial gears and two full gears, all intermeshing with the two partial gears attached to the two arm members.

16 Claims, 16 Drawing Sheets

